

Application #09/467,721
Submitted November 22, 2006
Reply to Office Action of August 22, 2006

I. AMENDED LIST OF CLAIMS

5. This listing of claims will replace all prior versions, and listings, of claims

in the application:

1. (cancelled)
2. (cancelled)
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (cancelled)
7. (cancelled)
8. (cancelled)
9. (cancelled)
10. (cancelled)

11. (previously presented) A machine for compressing of a plurality of video frames which make up a video signal, comprising:

- (a) a video digitizer configured to digitize a frame from said video frames;
- (b) a video memory which is able to receive a plurality of pixels from said video digitizer;
- (c) an encoding circuit for counting repeated instances of a pixel value comprising a number of pixel bits sub-sampled from each pixel when scanning said plurality of pixels and outputting a series of encoded data comprising a combined run-length field and a data field,

wherein the data field of each encoded data element comprises a number in the range from zero to the maximum value of said number of sub-sampled bits, and

Application #09/467,721
Submitted November 22, 2006
Reply to Office Action of August 22, 2006

wherein the run-length data field of each encoded data element comprises the repeat count of the value in said data field;

(d) a memory which is able to store said encoded data;

(e) an input/output device.

12. (previously presented) The machine of claim 11 wherein said encoding circuit variably selects one of a set of 3, 4, 5, 8, 9, 12, 15, 16, and 24, as the number of pixel bits sub-sampled from each pixel

wherein the number of pixel bits sub-sampled is less than the number of bits of the pixel being sub-sampled.

13. (original) The machine of claim 12 wherein said pixel value is extracted from the most significant bits of each color component.

14. (original) The machine of claim 11 wherein said input/output device is a storage medium.

15. (original) The machine of claim 11 wherein said input/output device is a communications transmission channel.

16. (cancelled)

17. (cancelled)

18. (cancelled)

19. (cancelled)

20. (cancelled)

21. (cancelled)

22. (cancelled)

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (new) The machine of claim 11 wherein said encoding circuit sub-samples nine pixel bits from each pixel, and

- wherein the number of pixel bits sub-sampled is less than the number of bits of the pixel being sub-sampled.
27. (new) The machine of claim 26 wherein the nine sub-sampled pixel bits comprises three most significant bits from each color component.
27. (new) The machine of claim 26 wherein run-length data field comprises seven bits.
28. (new) The machine of claim 11 wherein said encoding circuit sub-samples five pixel bits from each pixel, and
wherein the number of pixel bits sub-sampled is less than the number of bits of the pixel being sub-sampled.
29. (new) The machine of claim 28 wherein the five sub-sampled pixel bits comprises five bits from one color component.
30. (new) The machine of claim 28 wherein run-length data field comprises three bits.
31. (new) A system comprising:
- a) the compressing machine of claim 11; and
 - b) a decompressing machine for decompressing said series of encoded data that represents said video signal, comprising:
 - i) a second input/output device for reading said series of encoded data,
 - ii) a decoding circuit for decoding the encoded data and outputting a stream of pixel values, and
 - iii) a second memory for storing a reconstituted image comprising said stream of pixel values for as frames of a video sequence.
32. (new) A system comprising:
- c) the compressing machine of claim 15; and
 - d) a decompressing machine for decompressing said series of encoded data that represents said video signal, comprising:

Application #09/467,721
Submitted November 22, 2006
Reply to Office Action of August 22, 2006

- i) a second input/output device for reading said series of encoded data from said communications channel,
 - ii) a decoding circuit for decoding the encoded data and outputting a stream of pixel values, and
 - iii) a second memory for storing a reconstituted image comprising said stream of pixel values for as frames of a video sequence.
33. (new) The system of claim 26 wherein the decompressing machine further comprises a display for displaying each frame of the video sequence, and
wherein each frame is enlarged by stretching prior to displaying on the display.
34. (new) The system of claim 32 wherein the number of sub-sampled bits and the number of bits in the run-length data field are dynamically selected by a user viewing the video sequence at the decompressing machine.
35. (new) The machine of claim 11 wherein said encoding circuit further encrypts the pixel value prior to outputting the pixel value to the data field of the series of encoded data.
36. (new) The machine of claim 11 wherein said encoding circuit further compresses the stored encoded data with a lossless technique known in the art prior to providing the encoded data to the input/output device.
37. (new) The machine of claim 11 wherein each digitized frame has a width less than or equal to 320 pixel and a height less than or less 240 pixels.
38. (new) A storage medium in which the encoded data as claimed in claim 11 is stored.
39. (new) A machine for compressing of a plurality of video frames which make up a video signal, comprising:
- (a) a digital video means for providing a plurality of digital pixel values for each frame from said video frames;
 - (b) a first memory means for receiving the plurality of pixels from said digital video means;

Application #09/467,721
Submitted November 22, 2006
Reply to Office Action of August 22, 2006

- (c) an encoding means for counting repeated instances of a pixel value comprising a number of pixel bits sub-sampled from each pixel when scanning said plurality of pixels and outputting a series of encoded data comprising a combined run-length field and a data field,
wherein the data field of each encoded data element comprises a number in the range from zero to the maximum value of said number of sub-sampled bits, and wherein the run-length data field of each encoded data element comprises the repeat count of the value in said data field;
- (d) a second memory means for storing said encoded data;
(e) an input/output means for outputting said stored encoded data.